

ATTORNEY DOCKET NO. 09019.0058
Application Serial No. 09/280,791

pounds as measured on a one inch strip of a web having a thickness of 0.4 mm and a base weight of 70 gsm.

39. The spun-laced web according to claim 38, wherein the web is a fabric.

REMARKS

The specification has been amended to replace the “ASTM D3776-96” with “ASTM D3786-87” in order to correct a minor error on page 6, line 32.

Claims 1-23, 26-34 and 37-39 are pending in the application. First, the claims have been amended to consistently employ the term “web” in the preamble of the claims. In addition, Claims 35 and 36 have been cancelled without prejudice as being directed to a non-elected invention.

Amended Claim 34 and new Claim 38 are offered to focus on those properties previously presented in originally filed Claims 24 and 25. New Claims 37 and 39 have been added to provide additional protection for certain aspects of the present invention.

No new matter has been added by the foregoing amendments.

Finally, while reducing the number of issues on appeal, the subject matter of the newly added claims was also previously presented. Therefore, the foregoing amendment would not require further consideration and/or a new search and, as such, entry is proper.

The only rejections raised by the Examiner in the Office Action of May 9, 2001 are based on 35 U.S.C. § 103(a) obviousness. Specifically, the Office Action rejects the claims, as allegedly being obvious in view of both Honeycutt (U.S. Patent No. 5,207,837) and Yamamura

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(U.S. Patent No. 5,882,780). Alternatively, the Office Action also alleges that certain claims are obvious over both Honeycutt and Yamamura in view of Chen (U.S. Patent No. 5,990,377). Applicants respectfully disagree with these rejections.

It is well settled that in order to establish a *prima facie* case of obviousness, the art of record must teach, or at least suggest, the claimed invention as a whole. Moreover, there must be adequate motivation and a reasonable expectation of success to undertake the modifications proposed in the rejection. Here, neither standard has been met.

As amended herein, independent claims 34 and 38 each recite a web including limitations directed to properties of the claimed web, namely, limitations directed a minimum burst strength and/or a minimum tensile strength, which are not taught or suggested by the art of record. More specifically, Claim 34 recites, at least in part, a spun-laced web having a bursting strength value as measured according to ASTM D3786-87 which value is not less than a base value for the web's base weight and thickness corresponding to 50 psi as measured on a web having a thickness of 0.4mm and a base weight of 70 gsm. Similarly, Claim 38 recites in part, a spun-laced web having a tensile strength in the cross-direction as measured according to ASTM D5035-95 that is not less than a base value for the web's base weight and thickness corresponding to 13 pounds as measured on a one inch strip of web having a thickness of 0.4mm a base weight of 70 gsm.

In contrast, none of Honeycutt, Yamamura or Chen, alone or in combination, teach or even suggest a spun-laced web having the above-mentioned properties. As such, the disclosures of these references taken alone or in combination would not have motivated one of ordinary skill in the art to arrive at the spun-laced web of the present invention.

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Therefore, it is submitted that Claims 34 and 38, and those claims depending therefrom, are not obvious in view of the above-mentioned references and, as such, Applicants respectfully request that these rejections be withdrawn.

CONCLUSION

Attached herewith is a marked-up version of the changes made to claims by the foregoing Amendments. The attached page is captioned "**VERSION WITH MARKINGS TO SHOW CHANGES MADE.**"

In view of the Amendments and Remarks set out above, it is respectfully asserted that the rejections set forth in the Office Action of May 9, 2001 have been overcome and that the application is in condition for allowance. Therefore, Applicant respectfully seeks notification of same.

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A check in the amount of \$390.00 (Check No. 1214) is attached for the two-month extension of time. This amount is believed to be correct; however, the Commissioner is hereby authorized to charge any deficiency or credit any overpayment to Deposit Account No. 14-0629.

Respectfully submitted,
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CERTIFICATE OF EXPRESS MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as Express Mail Invoice No. EL 491883145US in an envelope addressed to: Assistant Commissioner for Patents, Washington, D.C. 20231, on this 18th day of September, 2001.

Everardo McFarlane

Date

9-18-01

VERSION WITH MARKINGS TO SHOW CHANGES MADE

In the specification:

The sentence beginning at line 31 of page 6 has been amended as follow:

3. The fabric preferably has a bursting strength greater than about 50, 60, 70, or 80 psi when measured by [ASTM D3776-96] ASTM D3786-87.

In the claims:

Claims 24, 25, 35 and 36 have been canceled without prejudice.

Claims 1-23 and 26-34 have been amended as follows:

1. (Twice Amended) A spun-laced poly(vinyl alcohol) [fabric] web according to one of claims 34 and 38 produced by a method comprising the consecutive steps of:
 - a. supporting a plurality of poly(vinyl alcohol) fibers on a mesh screen to form a web;
 - b. pressure liquid entangling the web; and
 - c. drying the web[, wherein said poly(vinyl alcohol) has a degree of polymerization of from about 300 to about 5000].
2. (Amended) The web [fabric] of claim 1 wherein the pressure liquid entangling is performed with water.

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3. (Amended) The web [fabric] of claim 1 wherein the method further comprises, after step a, the steps of
 - a. cross-lapping the web; and
 - b. stretching the web in the machine direction.
4. (Amended) The web [fabric] of claim 1 wherein the method further comprises, after step c, winding the web onto a roll.
5. (Amended) The web [fabric] of claim 1 wherein the pressure liquid entangling is performed at a water pressure of from about 20 to about 120 bar.
6. (Amended) The web [fabric] of claim 1 wherein the drying is performed at a temperature that exceeds the water solubility temperature of the poly(vinyl alcohol).
7. (Amended) The web [fabric] of claim 1 wherein the drying is performed by passing heated air through the web.
8. (Amended) The web [fabric] of claim 1 wherein the poly(vinyl alcohol) has a degree of polymerization of from about 1200 to about 2000.
9. (Amended) The web [fabric] of claim 1 wherein the poly(vinyl alcohol) has a degree of hydrolysis greater than 80%.
10. (Amended) The web [fabric] of claim 1 wherein the poly(vinyl alcohol) has a degree of hydrolysis greater than 98%.
11. (Amended) The web [fabric] of claim 1 wherein the poly(vinyl alcohol) fibers have an average denier of from about 1 to about 3 denier.

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12. (Amended) The web [fabric] of claim 1 wherein the poly(vinyl alcohol) fibers have an average length of from about 30 mm to about 60 mm.
13. (Amended) The web [fabric] of claim 1 wherein the poly(vinyl alcohol) fibers are soluble in water above 65 °C, and insoluble in water below 65 °C.
14. (Amended) The web [fabric] of claim 1 wherein the poly(vinyl alcohol) fibers are soluble in water above 90 °C, and insoluble in water below 90 °C.
15. (Amended) The web [fabric] of claim 1 wherein, after step c, the web has a thickness of from about 0.3 mm to about 0.6 mm.
16. (Amended) The web [fabric] of claim 1 wherein, after step c, the web has a base weight of from about 40 g/m² to about 100 g/m².
17. (Amended) The web [fabric] of claim 1 further wherein the poly(vinyl alcohol) fibers are carded along with other fibers selected from the group consisting of polyester, polypropylene, polyethylene, rayon, cellulose, nylon, and ethylene/(meth)acrylic acid copolymer.
18. (Amended) The web [fabric] of claim 1 wherein the method further comprises, after step c, adhering a substantially impermeable layer to the web.
19. (Amended) The web [fabric] of claim 1 wherein the method further comprises, after step c, adhering a substantially impermeable layer to the web, wherein the layer is polyethylene, polypropylene, polyester, or ethylene/(meth)acrylic acid copolyester.
20. (Amended) The web [fabric] of claim 1 wherein the method further comprises, after step c, contacting the web with a liquid selected from the group consisting of isopropyl alcohol, water, methyl ethyl ketone, methyl propyl ketone, and acetone.

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21. (Amended) The web [fabric] of claim 1 wherein the method further comprises contacting one or both sides of the web with an aqueous finishing formulation to impart water repellency to the web [fabric].
22. (Amended) The web [fabric] of claim 1 wherein the method further comprises, before step c, contacting one or both sides of the web with an aqueous finishing formulation to impart water repellency to the web [fabric].
23. (Amended) The web [fabric] of claim 1 wherein the method further comprises, before step c, contacting the web with an aqueous finishing formulation to impart water repellency to the web [fabric], wherein the resulting web [fabric] comprises:
 - a. from about 0.01 to about 3 wt. % fluorocarbon; and
 - b. from about 0.01 to about 20 wt. % wax.
26. (Amended) The web [fabric] of claim 1 having an air permeability of greater than 150 CFM/sq. ft. when measured by ASTM D737-96.
27. (Amended) The web [fabric] of claim 1 having a flammability rating of IBE or DNI when measured according to ASTM D1230-94.
28. (Amended) The web [fabric] of claim 1 having a water impact penetration less than 1.0 grams when measured by AATCC 42-94.
29. (Amended) The web [fabric] of claim 1 configured into a surgical web [fabric] selected from the group consisting of gowns, drapes, and protective apparel.
30. (Amended) The web [fabric] of claim 1 configured into an absorbent pad.
31. (Amended) The web [fabric] of claim 1 configured into an absorbent pad selected from the group consisting of gauze, swabs, towels, and wipes.

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32. (Amended) The web [fabric] of claim 1 configured into a wipe that is at least 25% saturated with a solvent.
33. (Amended) The web [fabric] of claim 1 configured into an air filter.
34. (Twice Amended) A spun-laced web comprising a plurality of [fabric comprising a] poly(vinyl alcohol) fibers [fibrous web], wherein:
 - a. the web [fabric] is non-woven;
 - b. binding adhesives are substantially absent from the web [fabric];
 - c. heat fusion is substantially absent from the web [fabric];
 - d. needlepunching is substantially absent from the web [fabric];
 - e. stitchbonding is substantially absent from the web [fabric]; [and]
 - f. the [said] poly(vinyl alcohol) has a degree of polymerization of from about 300 to about 5000; and
 - g. the web has a bursting strength value as measured according to ASTM D3786-87 which value is not less than a base value corresponding to 50 psi as measured on a web having a thickness of 0.4 mm and a base weight of 70 gsm.

New claims 37-39 have been added as follows:

37. The spun-laced web according to claim 34 wherein the web is a fabric.
38. A spun-laced web consisting essentially of a plurality of poly(vinyl alcohol) fibers, wherein:

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- a. the web is non-woven;
 - b. binding adhesives are substantially absent from the web;
 - c. heat fusion is substantially absent from the web;
 - d. needlepunching is substantially absent from the web;
 - e. stitchbonding is substantially absent from the web;
 - f. the poly(vinyl alcohol) has a degree of polymerization of from about 300 to about 5000; and
 - g. the web has a tensile strength in the cross direction as measured according to ASTM D5035-95 that is not less than a base value corresponding to 13 pounds as measured on a one inch strip of a web having a thickness of 0.4 mm and a base weight of 70 gsm.
39. The spun-laced web according to claim 38, wherein the web is a fabric.